

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of  
 Edward G. Kirby, et al. : Examiner: Russell Kallis  
 Serial No. 09/763,005 : Group Art Unit: 1638  
 Filed: April 20, 2001 : Docket: 1594-RUT.98-0046  
 For: "Transgenic Poplar Trees :  
 Comprising Glutamine Synthetase :  
 From Pine Having Improved Nitrogen :  
 Metabolism and Methods of Making :  
 and Using the Same"

CERTIFICATE OF MAILING BY FACSIMILE TRANSMISSION

I hereby certify that this Correspondence is being transmitted to Examiner Russell Kallis via facsimile no. 1-571-273-0798 on the date listed below to the COMMISSIONER FOR PATENTS, P.O. Box 1450, Alexandria, VA 22313-1450.

March 1, 2005  
 Date of Certificate

Janice M. Nightlinger  
 Janice M. Nightlinger

SUBMISSION OF PAPER COPY OF SEQUENCE LISTING

In response to the Examiner's request for a copy of the Substitute Sequence Listing, Applicants' undersigned attorney respectfully submits and verifies that the enclosed paper copy of the sequence listing is identical and contains no new matter from the one previously submitted on September 11, 2003.

Respectfully submitted,

3/1/05  
 Date

Kathleen D. Rigaut  
 Kathleen D. Rigaut, Ph.D., J.D.  
 PTO Registration No. 43,047

## SEQUENCE LISTING

<110> Edward G. Kirby  
 Francisco Canovas Ramos  
 Fernando Gallardo Alba

<120> Transgenic Poplar Trees Comprising  
 Glutamine Synthetase From Pine Having Improved Nitrogen  
 Metabolism and Methods of Making and Using the Same

<130> RUT98-0046

<140> 09/763,005  
 <141> 2001-04-20

<150> PCT/US99/18267  
 <151> 1999-08-11

<150> 60/096,032  
 <151> 1998-08-11

<160> 4

<170> FastSEQ for Windows Version 3.0

<210> 1  
 <211> 30  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Primer

<400> 1

tgttgatgcc cattataagg cttgtctcta

30

<210> 2  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Primer

<400> 2

ggtcgtctca gcaatcat

18

<210> 3  
 <211> 1423  
 <212> DNA  
 <213> Pinus sylvestris

<400> 3

tcccttctct ctgggttggc ttggagagtg gccatgtcga gcttataac agaccccttc  
 aaccccttgacc tgagcgcacgt gacagagaag gtcatttcgcag agtataatatg gattggagga  
 tcaggaatgg atatgcgcag taaagccaga tctctgtcag gacctgtgag tagcgttaaa  
 gagcttccca aatggaaacta tgacggctcc agcaactggac aggtcaagg acatgacacgc  
 gaagtcattc tatatccaca agctatcttc cgtgatccat ttccgcagagg aaagcacatt  
 ttggtaatct gtgatgccta ctctccat gggactgcta ttccctccaa caagaggct

60

120

180

240

300

360

gcagcagcga aaattttaa	cgaaaaggcg	gttagtgatg	aagagacatg	gtacgggctt	420
gaacaagaat atacactgtt	gcaaaaggac	gtccaaatggc	ctcttgctg	gccaatttgg	480
ggctccccg gtcctcaggg	cccatattac	tgtggagttg	gagctgacaa	agcctgggga	540
cgagacattt	ttgtatgccc	ttataaggct	tgtctctatt	caggaatcaa	600
atcaatggag aagtcatgcc	agggcagtgg	gaatttcaag	taggtccgtc	atgtgggtatc	660
tcagcagcag atgagctgt	gtgtgtcg	tttattatgg	agaggattac	agaaaaaggcg	720
ggtgtcggtc	tgtctttgt	tcccaagcca	attgaggggg	actggaatgg	780
cacacaaaatt	acagcaccaa	gtccatgcgc	aaggagggag	gcttgcgaat	840
gcaatagaaa aactgaagtt	gaggcataag	gagcatattt	ctgcctatgg	ggagggaaat	900
gagagacgcc	tcactggcg	gcacgagaca	gcagacatga	atacctttc	960
gcaaatcgag	gagcttcagt	tagagtggc	cgggacacag	aaaaagaagg	1020
tttgaggacc	gtcgacactgc	ttcaaaatcg	gatccatada	tagtgcattc	1080
gagacgacca	ttctatggaa	accttaaatt	acaaaagtgg	acgcgtggc	1140
gtgggtcg	gttttgagg	ccagcgtcac	tgataagcta	atatgtatgt	1200
ccaatgttta	agtaggttgg	taacttgc	ttgggtgtgg	gtagactga	1260
aacaatttcc	tcttgctata	tggatata	tatatttttgc	actttggtca	1320
tggcgagggc	ttaaaaagac	tctctttac	cttattttat	tccgttgtgg	1380
cgacaaaattt	ttttagatgt	ttgaatatga	tatatttttgc	aaagatgtatt	1423

<210> 4  
 <211> 357  
 <212> PRT  
 <213> *Pinus sylvestris*

<400> 4					
Met	Ser	Ser	Val	Leu	Thr
1			5		10
Asp	Lys	Val	Ile	Ala	Glu
20			25		30
Asp	Met	Arg	Ser	Lys	Ala
35			40		45
Lys	Glu	Leu	Pro	Lys	Tyr
50			55		60
Gln	Gly	His	Asp	Ser	Glu
65			70		75
Asp	Pro	Phe	Arg	Arg	Gly
85			90		95
Ser	Pro	Asn	Gly	Thr	Ala
100			105		110
Lys	Ile	Phe	Asn	Glu	Lys
115			120		125
Leu	Glu	Gln	Glu	Thr	Leu
130			135		140
Gly	Trp	Pro	Ile	Gly	Tyr
145			150		155
Gly	Val	Gly	Ala	Asp	Lys
165			170		175
Tyr	Lys	Ala	Cys	Leu	Tyr
180			185		190
Glu	Val	Met	Pro	Gly	Gln
195			200		205
Ile	Ser	Ala	Ala	Asp	Glu
210			215		220
Ile	Thr	Glu	Ala	Gly	Val
225			230		235
Glu	Gly	Asp	Trp	Asn	Gly
245			250		255
Ser	Met	Arg	Lys	Glu	Gly
260			265		270
Lys	Leu	Lys	Leu	Arg	His
275			280		285

Asn Glu Arg Arg Leu Thr Gly Arg His Glu Thr Ala Asp Met Asn Thr  
290 295 300  
Phe Ser Trp Gly Val Ala Asn Arg Gly Ala Ser Val Arg Val Gly Arg  
305 310 315 320  
Asp Thr Glu Lys Glu Gly Lys Gly Tyr Phe Glu Asp Arg Arg Pro Ala  
325 330 335  
Ser Asn Met Asp Pro Tyr Ile Val Thr Ser Met Ile Ala Glu Thr Thr  
340 345 350  
Ile Leu Trp Lys Pro  
355